

# What's New with SAP BW/4HANA 2.0

Product Management, SAP Data Warehousing  
February 27, 2019

PUBLIC

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# Agenda

Introduction and the evolution of SAP BW

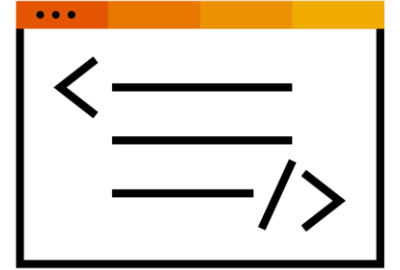
SAP BW/4HANA Web Cockpit

BW Modeling Tools in Eclipse with SAP BW/4HANA 2.0

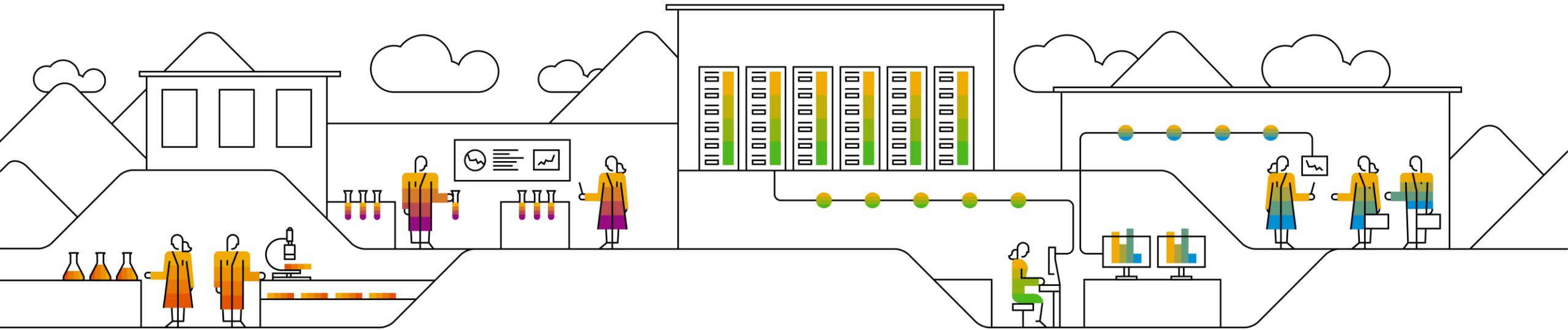
Data Integration with SAP BW/4HANA 2.0

Data Protection Management in SAP BW/4HANA 2.0

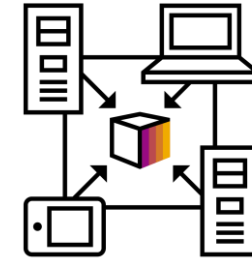
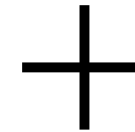
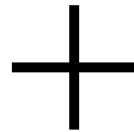
Analytic Engine in SAP BW/4HANA 2.0 and SAP Analytics Cloud Integration



# Introduction and the evolution of SAP BW



# SAP BW/4HANA 2.0 – Key Values



## **business agility**

Flexibility to compete in real time and adjust to changing requirements

## **cloud ready**

Deploy or prototype on a cloud that grows with your business

## **modern data warehousing**

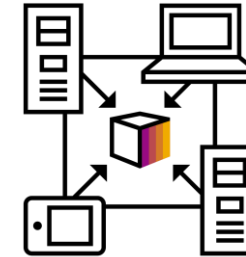
High performance, future-proof platform for all new challenges

# SAP BW/4HANA 2.0 – Mission Statement

## SAP BW/4HANA 2.0 is...

- SAP's vision for a modern packaged data warehousing solution
- highly optimized for SAP HANA
- simplifying every aspect of data warehousing
- capitalizing on all business applications and modern data sources via smart integration
- driving innovation with a unified data platform

modern data warehousing



## SAP BW/4HANA 2.0 Key Values

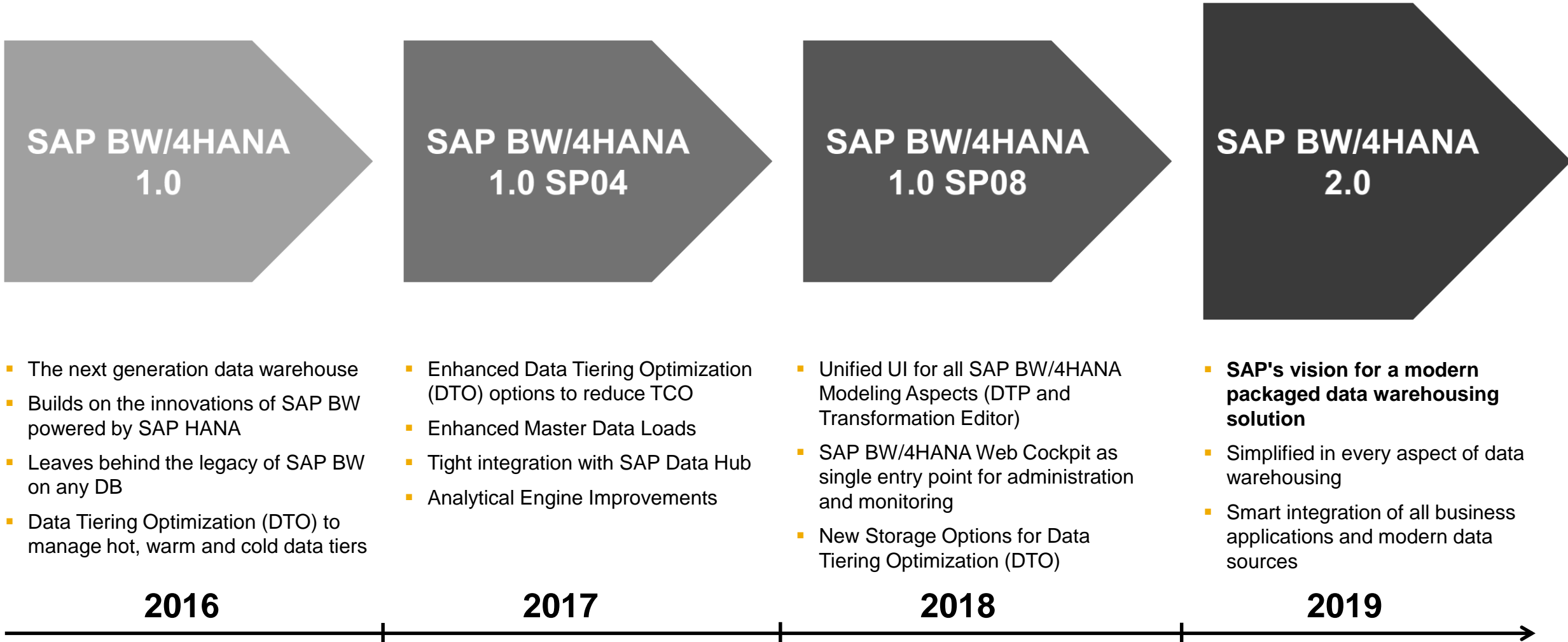


cloud ready

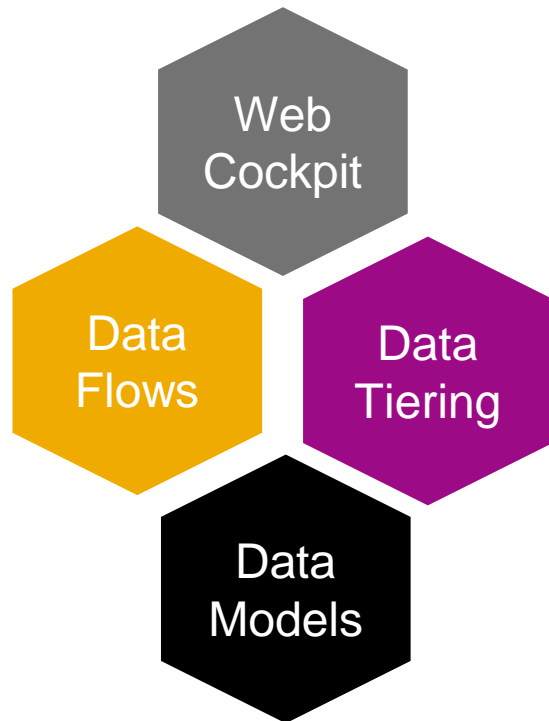


business agility

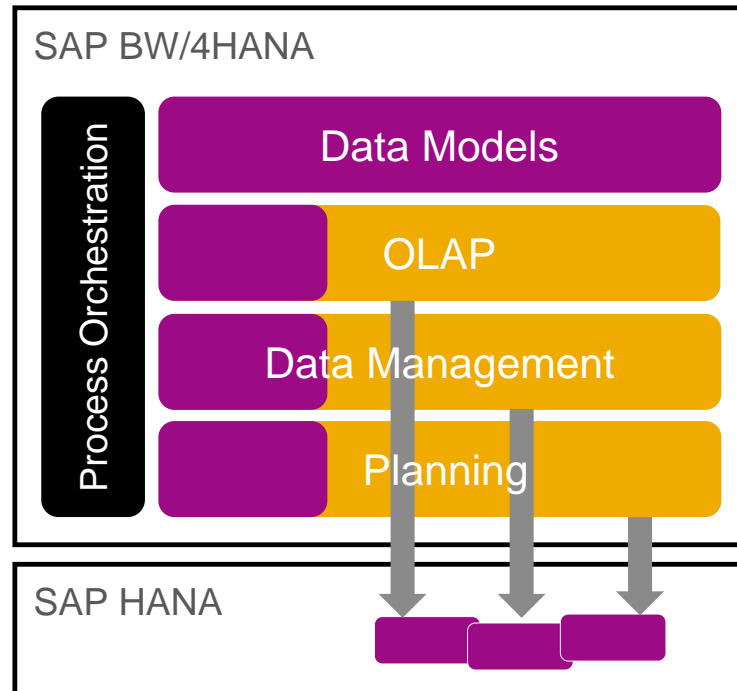
# SAP BW/4HANA – The Evolution From SAP BW/4HANA 1.0 to 2.0



# SAP BW/4HANA 2.0 – Simplify the provisioning of timely business insights



Transform data practices to gain efficiency and agility



Deploy live immediate insights at scale



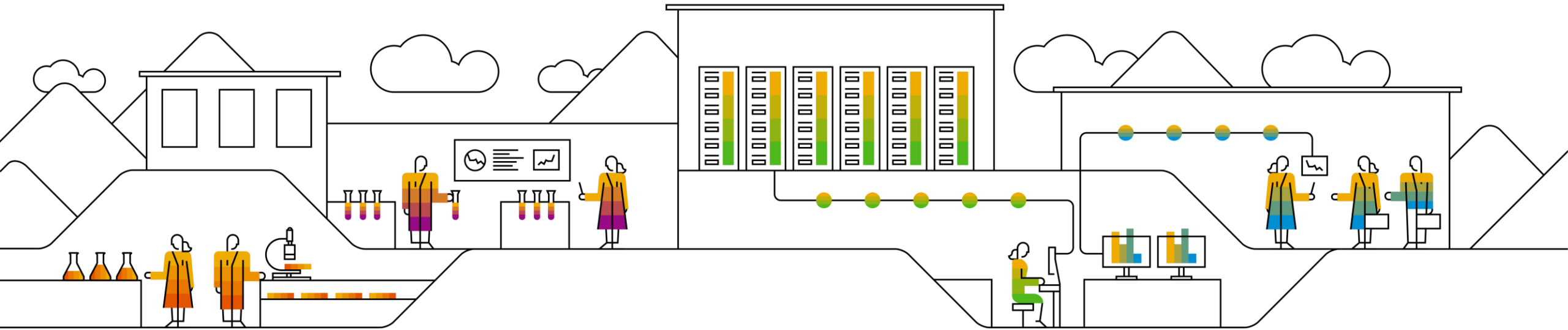
Amazon Web Services  
Google Cloud Platform  
Microsoft Azure

Get up and running quickly and easily in the cloud



# SAP BW/4HANA 2.0

## Web Cockpit



# Modern UI: SAP BW/4HANA Web Cockpit

## Overview

- Following SAP Fiori design patterns
- Single point of entry for administration tasks in SAP BW/4HANA
- Unified user experience
- Extensible for own applications and groups
- Modifiable for user context and authorizations

## SAP BW/4HANA Web Cockpit

The screenshot displays the SAP BW/4HANA Web Cockpit interface. The top navigation bar includes 'Home' and search icons. The main content area is organized into several sections:

- My Home:** Contains five tiles: 'Process Chain Editor' (490 process chains), 'Process Variant Editor' (625 process variants), 'Analysis Authorization Editor' (44 analysis authorizations), 'Operating System Monitor', and 'SAP HANA Remote Subscriptions'.
- Monitoring:** Contains eight tiles: 'Process Chains View dashboard', 'Process Chains View latest status' (351 process chains), 'Process Chain Runs View runs' (8,97 k process chain runs), 'Processes View last 48 hours' (7 open processes), 'Remodeling Requests View requests' (29 requests in process), 'Operational Data Provisioning Monitor Queues', 'Data Volume Statistics Dashboard', and 'Data Selection Statistics Dashboard'.
- Data Management:** Contains five tiles: 'DataStore Objects Manage requests' (2,611 DataStore objects), 'InfoObjects Manage requests' (2,103 InfoObjects), 'External SAP HANA Views Manage views' (415 generated views), 'Data Tiering Summary View objects' (2,60 k tiering-enabled objects), and 'Data Tiering Maintenance Manage partitions' (3,72 k partitions).
- Data Protection and Privacy:** Contains two tiles: 'Data Protection Worklists Process worklists' (70 open worklists) and 'Data Protection Notifications View notifications' (101 k new notifications).

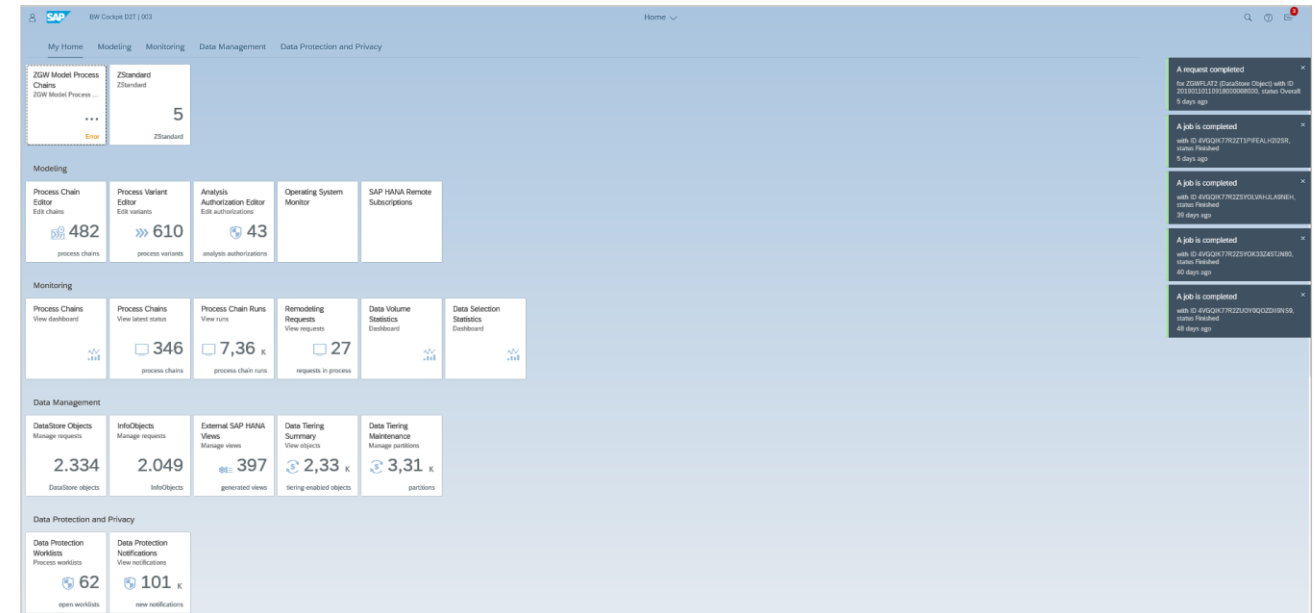
On the right side, there are four notification cards, each indicating a completed job or request with details like ID, status, and completion time.

# Modern UI: SAP BW/4HANA Web Cockpit

## New Features Overview

- Simplified Search
- Personalization, Subscription & Notifications
- Enhanced Master Data Maintenance
- Data Volume & Data Selection Statistics
- Execute and Schedule Remodeling Requests
- Data Tiering Summary & Maintenance (partition management)
- Data Protection Management (Worklist & Notifications)
- Analysis Authorization Editor
- External SAP Hana View Management
- Enhanced Process Chain Maintenance (InfoArea)
- Direct File Upload to Data Store Objects

## SAP BW/4HANA Web Cockpit



# Modern UI: Simplified Search

## Feature Description

- Embedded Search in the SAP BW/4HANA Cockpit
- Search on object types are possible
- Comprehensive result sets are displayed

## Benefits

- Higher Productivity

## Simplified Search

The screenshot illustrates the SAP BW/4HANA Cockpit interface with a search function. The search bar at the top right is set to 'ZGW\*'. A dropdown menu is open, showing a list of object types: All, Apps, Aggregation Levels, CompositeProviders, Data Transfer Processes, DataStore Objects, InfoObjects, Open ODS Views, Process Chains, Process Variants, and Queries. The search results pane displays 19 results, including DataStore Objects, Data Transfer Processes, Queries, CompositeProviders, and Process Chains. Each result card shows a description, InfoArea, and Person Responsible.

Object Type	Description	InfoArea	InfoArea Description	Person Responsible
DataStore Object	ZGWSOH Sales Order Header	ZGW_BW4_2	Gordon Witzel BW4 2.0	WITZELG
Data Transfer Process	DTP_4VGQIK77RZZUOXWPGN1ABGY9 ADSO ZGWSOH -> ADSO ZGWSOH2			
Query	ZGWAQ01	ZGWCP		WITZELG
CompositeProvider	ZGWCP	ZGW_BW4_2	Gordon Witzel BW4 2.0	WITZELG
Process Chain	ZGWLOAD	ZGW_BW4_2		WITZELG

# Modern UI: Personalization of SAP BW/4HANA Web Cockpit

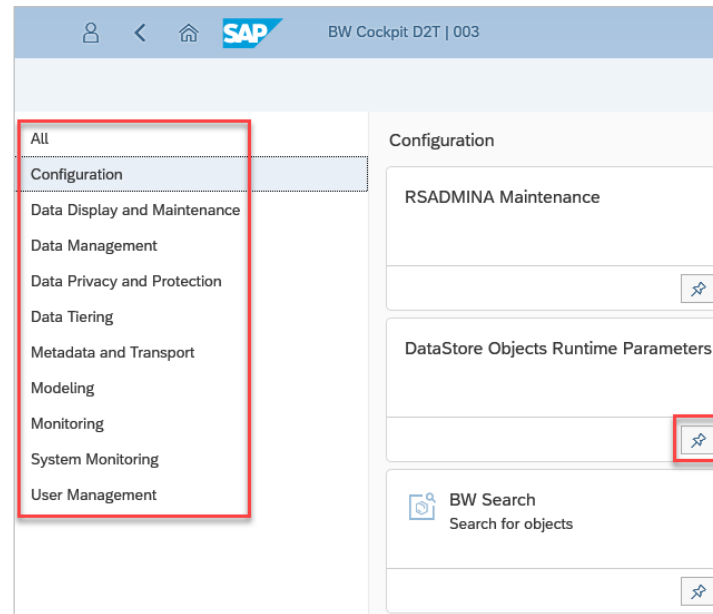
## Feature Description

- Home screen of SAP BW/4HANA Web Cockpit is fully customizable
- Adding Groups and Apps to the Home screen of the SAP BW/4HANA Web Cockpit
- Add fully customizable views as tiles to the SAP BW/4HANA Web Cockpit Home screen
- Personalized views can be shared (E-Mail) or saved as custom tiles

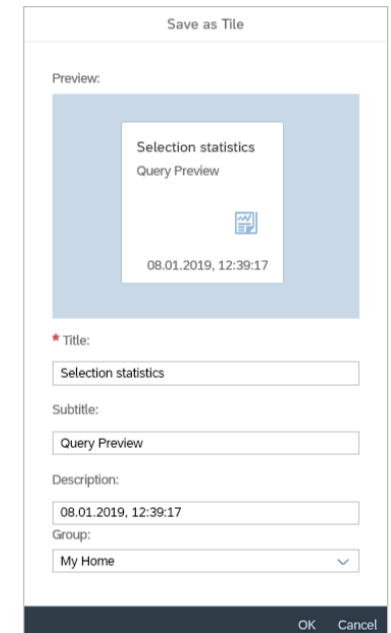
## Benefits

- Higher Productivity

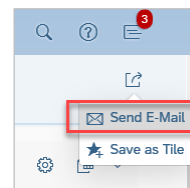
## Personalization



Customizing options



Tiles



E-Mail Notification

# Modern UI: Notification Handling

## Feature Description

- Different types of Notifications: Process Chains, Requests, Jobs
- Navigation from Notification is possible with a mouse click for Requests and Process Chains
- Sortable by Date, Type or Priority
- Notification Structure: Description, Sub-description, Time Stamp
- Color Coding for Priorities
- Configured and stored in the user settings

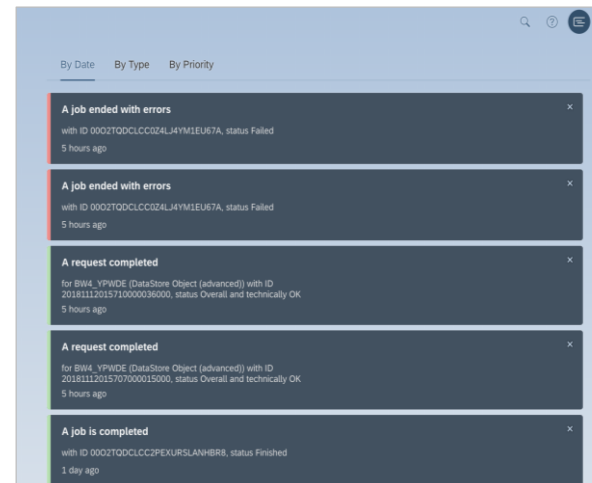
## Benefits

- Higher Productivity
  - Simplified Viewing of Results of Triggered Actions
  - Simplified Reaction on Critical Changes

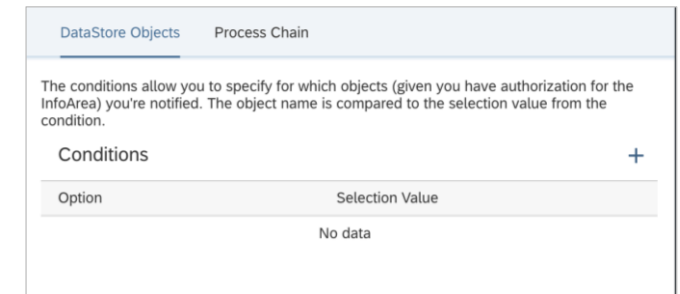
## Notification Handling



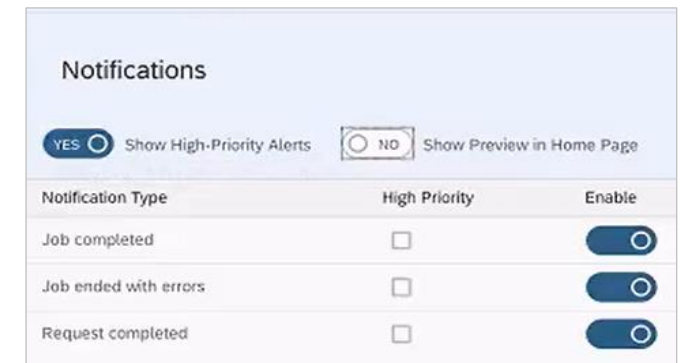
Number of New Notifications



Display of Notifications



Subscription to aDSO and Process Chains



Notification Settings

# Modern UI: New Master Data Maintenance

## Feature Description

- Integrated into SAP BW/4HANA Web Cockpit
- Supports creation, modification and deletion of master data
- Where-used functionality to investigate usage of dedicated master data values by InfoProvider
- Copy & paste support for mass data creation or modification
- InfoObjects can be loaded in Streaming Mode

## Benefits

- Higher Productivity
- Easy maintenance

## Master Data Maintenance

Employee	Accountnumber	Education	First Name	Gender	Last Name
100084	0000000000	BACHELOR	DEL	M	PARTAIN
100085	0000000000	COLLEGE	DONN	M	KLINGNER
100086	0000000000	MASTER	CHRISTOPEF	M	NEWHOUSE
100087	0000000000	MASTER	FRITZ	M	TRANCOSO

Master Data Value	SID	Used in	Type	Occurrence
100100	100100	ZDPSAL2	DataStore Object (advanced)	2
100100	100100	ZDPSAL1	DataStore Object (advanced)	1
100100	100100	ZHS54	DataStore Object (advanced)	1

# Modern UI: ABAP CDS Views for SAP BW/4HANA Statistics

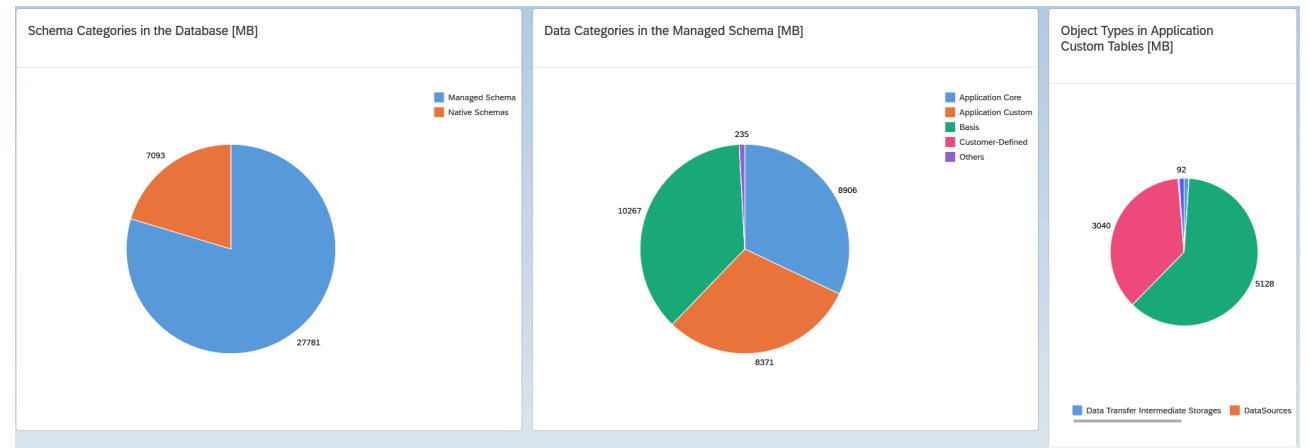
## Feature Description

- SAP BW/4HANA application statistics available as ABAP CDS Views
- New Content to replace former Technical Content for:
  - Current query performance
  - Process Chain and Data Transfer Process
  - Data Volume Statistics & Data Store Object Request
- Delivered with SAP BW/4HANA 2.0:
  - Data Volume History statistics
  - Data Selection statistics
  - Extraction/Staging support for statistics data

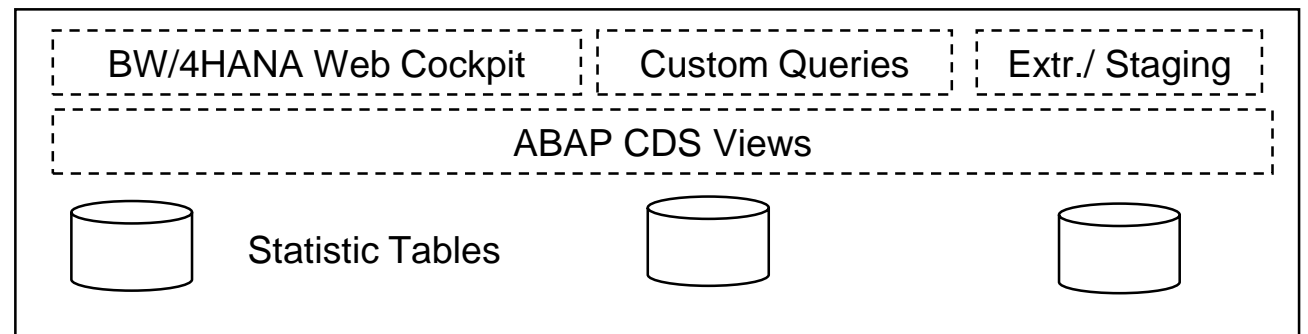
## Benefits

- Out of the box access to SAP BW/4HANA application statistics
- Web UI accessible from multiple devices
- Configurable to build custom monitoring

## Statistics



Data Volume Statistics Dashboard in the SAP BW/4HANA Web Cockpit





# Modern UI: Data Tiering Optimization (DTO)

## Feature Description

- DTO is one concept for hot, warm and cold data based on HANA Technology such as SDA, Scale Out and disk storage in SAP IQ, Vora, Hadoop
- Displacement of data as simple and periodic housekeeping activity

## New Features

- Administration and Monitoring in SAP BW/4HANA Web Cockpit
  - Data Tiering Maintenance and Monitoring
  - Embedded in Data Volume History Statistics (data growth) & Data Selection Statistics (access to time slices)
- Coverage of Inventory Data Store Objects in cold store
- Cold Store connection configurable on object level
- Data Tiering on DataStore Objects updated in streaming mode

## Benefits

- Easy and low effort to define and implement smart data aging concepts

## Data Tiering Optimization

The screenshot shows a list of DataStore Objects with their partition distribution visualized as stacked bar charts. Each bar is divided into segments representing different tiers: red for 'HOT', yellow for 'WARM', and blue for 'COLD'. The size of each segment is indicated by a number inside it.

DataStore Object	Partition Distribution	Size(MB)
[blurred]	3 (HOT)   3 (COLD)	43,810
[blurred]	8 (HOT)   4 (WARM)   5 (COLD)	24,561
[blurred]	3 (HOT)   1 (WARM)   2 (COLD)	22,434
[blurred]	5 (HOT)   1 (COLD)	22,290
[blurred]	7 (HOT)   3 (WARM)   7 (COLD)	21,417

For more information see [Data Tiering Optimization blog](#)

The screenshot shows a detailed table for DataStore Objects (56). The 'Plan Temperature' button is highlighted with a red box. The table columns include Partition Number, Low (Inclusive), High (Exclusive), Current Temperature, Planned Temperature, Status, Logs, and Storage(MB).

DataStore Object	Partition Number	Low (Inclusive)	High (Exclusive)	Current Temperature	Planned Temperature	Status	Logs	Storage(MB)
<input checked="" type="checkbox"/> ZGWFLAT	1	2010	2011	HOT	HOT	<input type="checkbox"/> OK	<a href="#">View Logs</a>	0,322
<input checked="" type="checkbox"/> ZGWFLAT	2	2011	2012	HOT	HOT	<input type="checkbox"/> OK	<a href="#">View Logs</a>	0,322
<input type="checkbox"/> ZGWFLAT	3	2012	2013	HOT	HOT	<input type="checkbox"/> OK	<a href="#">View Logs</a>	0,322
<input type="checkbox"/> ZGWFLAT	4	2013	2014	HOT	HOT	<input type="checkbox"/> OK	<a href="#">View Logs</a>	0,322
<input type="checkbox"/> ZGWFLAT	5	2014	2015	HOT	HOT	<input type="checkbox"/> OK	<a href="#">View Logs</a>	0,411

# Modern UI: External SAP HANA View Management

## Feature Description

- Administration and Monitoring in SAP BW/4HANA Web Cockpit
  - Object Details
  - Object Authorizations
  - Analytic Privileges
  - Database Privileges
  - General Settings
- Check View Consistency
- Regenerate View
- View XML
- Successor of the backend transaction RS2HANA\_ADMIN

## Benefits

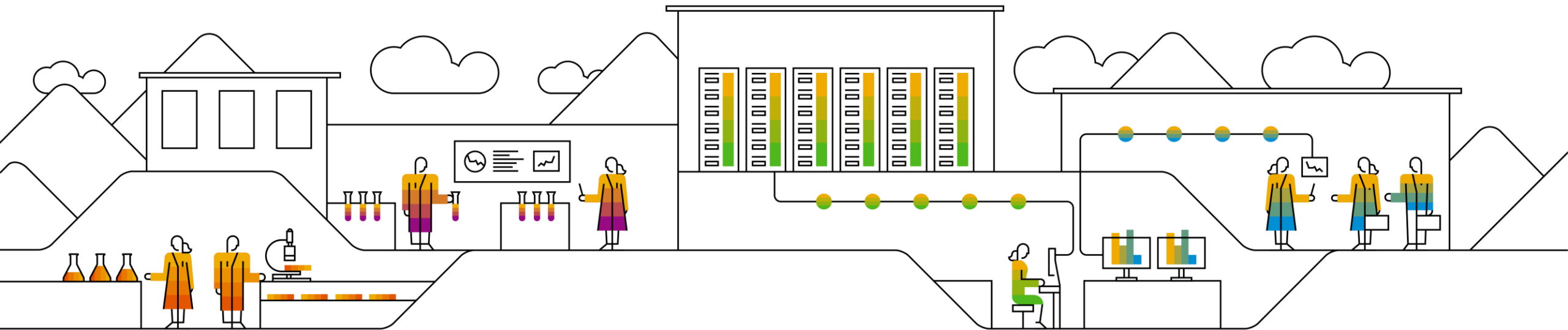
- Easy and central definition and implementation
- Higher Productivity

## SAP HANA View Management

The screenshot displays the 'External SAP HANA View Administration' interface. The main panel shows a list of objects with columns for Object Name, Status, Type, SAP HANA Package, SAP HANA View ID, and ViewXML. The objects listed include HNVW\_AUTH, OEPM\_ADSO1 through ADSO4, QBWVA\_03 and 04, /IMO/D\_SD50 and /IMO/D\_SD53, and NI\_EM\_ABC. The status column shows various icons (warning, error, success). The interface also includes a sidebar with navigation options like Object Details, Object Authorizations, Analytic Privileges, Database Privileges, and General Settings. At the bottom, there are buttons for 'Export Language File to Database', 'Check View Consistency', and 'Regenerate View'.

Object Name	Status	Type	SAP HANA Package	SAP HANA View ID	ViewXML
HNWV_AUTH	⚠	ADSO	system-local.bw.bw2hana	HNWV_AUTH	<a href="#">View XML</a>
OEPM_ADSO1	⚠	ADSO	system-local.bw.bw2hana.0	EPM_ADSO1	<a href="#">View XML</a>
OEPM_ADSO2	⚠	ADSO	system-local.bw.bw2hana.0	EPM_ADSO2	<a href="#">View XML</a>
OEPM_ADSO3	⚠	ADSO	system-local.bw.bw2hana.0	EPM_ADSO3	<a href="#">View XML</a>
OEPM_ADSO4	⚠	ADSO	system-local.bw.bw2hana.0	EPM_ADSO4	<a href="#">View XML</a>
QBWVA_03	⚠	ADSO	system-local.bw.bw2hana	QBWVA_03	<a href="#">View XML</a>
QBWVA_04	⚠	ADSO	system-local.bw.bw2hana	QBWVA_04	<a href="#">View XML</a>
/IMO/D_SD50	⚠	ADSO	system-local.bw.bw2hana.imo	D_SD50	<a href="#">View XML</a>
NCUM_C1	⚠	ADSO	system-local.bw.bw2hana	NCUM_C1	<a href="#">View XML</a>
/IMO/D_SD53	⚠	ADSO	system-local.bw.bw2hana.imo	D_SD53	<a href="#">View XML</a>
NI_EM_ABC	⚠	ADSO	system-local.bw.bw2hana	NI_EM_ABC	<a href="#">View XML</a>

# BW Modeling Tools in Eclipse with SAP BW/4HANA 2.0



# Modern UI: BW/4HANA Modeling Tools in Eclipse

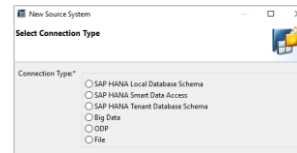
Delivered Eclipse Editors in SAP BW/4HANA

## Overview

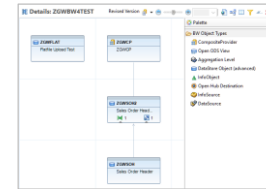
- Unified UI for all BW/4HANA Modeling
- Single point of entry for modeling tasks in SAP BW/4HANA
- SAP GUI no longer required for modeling tools

## Benefits

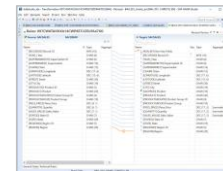
- Reduced efforts and easy to use
- Faster time to value



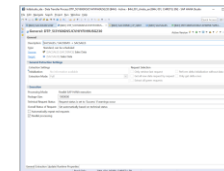
Source System



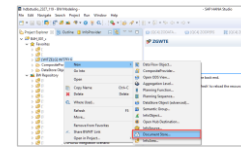
Data Flow Object



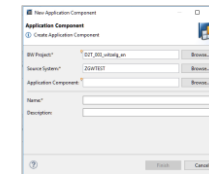
Transformation



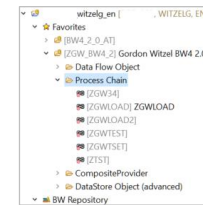
Data Transfer Process (DTP)



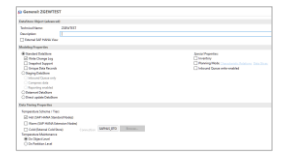
Document Store



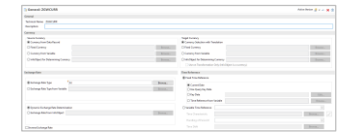
Application Component



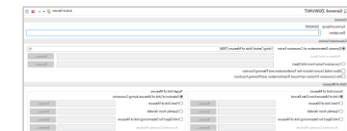
Process Chain Integration



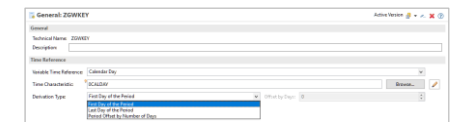
DataStore Object (optimized editor)



Currency Translation Type



Unit Conversion Type



Key Date Derivation Type

SAP BW/4HANA 1.0

SAP BW/4HANA 2.0

# Modern UI: BW Modeling Tools in Eclipse

## New Features Overview

- Enhanced Data Flow Copy (more than one copy, definition on object level)
- DataFlow: Display of HANA View(s) in CompositeProvider
- Optimized Data Store Object Editor
- Data Store Object remodeling in Eclipse and execution in SAP BW/4HANA Web Cockpit
- Data Tiering Optimization – cold store connection configurable on object level
- Simplified Search
- New Editors: Currency Translation Type, Unit Conversion Type and Key Date Derivation
- HDI consumption
- Asynchronous object activation – editor is not blocked during activation
- Process Chain Integration

## SAP BW/4HANA Modeling Tools

General: ZGWFLAT

Revised Version

Remodeling is pending. DataStore object is not activated. Please run remodeling.

DataStore Object (advanced)

Technical Name: ZGWFLAT

Description: Flatfile Upload Test

External SAP HANA View

Log Read Access Output

Modeling Properties

Standard DataStore Object

Write Change Log

Snapshot Support

Unique Data Records

Staging DataStore Object

Inbound Queue Only

Compress Data

Reporting-Enabled

Data Mart DataStore Object

Direct Update DataStore Object

Special Properties

Inventory-Enabled

Planning-Enabled

Write Interface-Enabled

Data Tiering Properties

Temperature Schema / Tiers

Hot (SAP HANA Standard Nodes)

Warm (SAP HANA Extension Nodes)

Cold (External Cold Store)

Connection: SAPHDP

Temperature Maintenance

On Object Level

On Partition Level

BW Object Search | ABAP Object Search | ABAP Source Search | File Search | Task Search

Search String (\* = any string, ? = any character):

Name  Description

BW Project: D2T\_003\_witzelg\_en

Active Objects  Inactive Objects  Content Objects

Object Type:

Created: E

Last Change: F

Uses Object:

- DMOD [Data Flow Object]
- RSPC [Process Chain]
- ELEM [Query Element]
- HCPR [CompositeProvider]
- COPR [Local CompositeProvider]
- FBPA [Open ODS View]
- AINX [Analytic Index]
- ALVL [Aggregation Level]
- ADSO [DataStore Object (advanced)]
- SEGR [Semantic Group]
- BDPR [BADI-Provider]

# Modern UI: New DataStore Object Remodeling Capabilities

## Feature Description

- New option in DSO editor -> Remodeling
- Enables new modeling approaches (start agile and move to more guided data models EDW vs. DataMart)
- Available on Field or InfoObject selection in the Fields Tree
- Remodeling options:
  - Replace by InfoObject
  - Replace by Field
  - Fill with Value of InfoObject (must exist in current ADSO)
  - Fill with Value of Field (must exist in current ADSO)
  - Filled by Constant Value

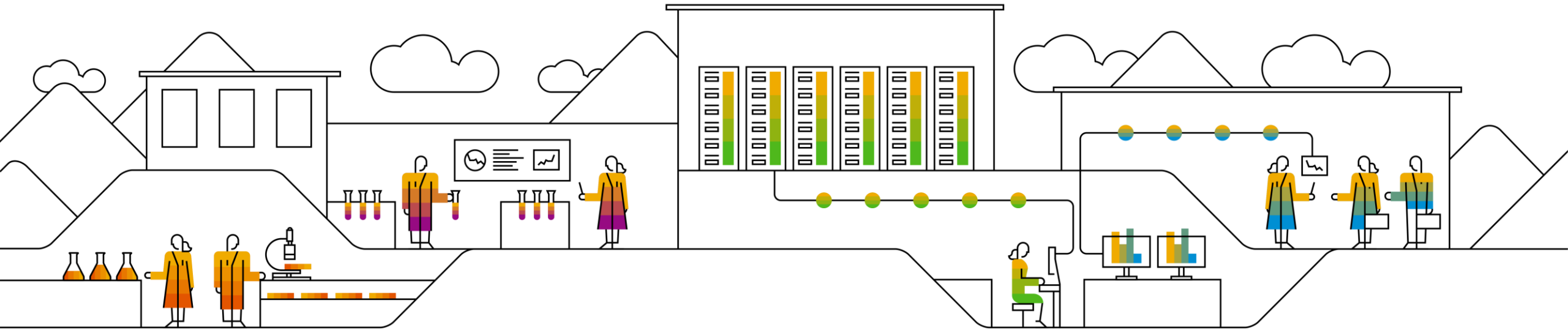
## Benefits

- Flexibility to enhance/change data models without reloading
- Low remodeling effort and easy to use
- Higher Productivity

## DataStore Object Remodeling

The screenshot displays the SAP DataStore Object Remodeling interface. The main window shows the 'Details: ZGWSOH2' view with a 'Fields' tree on the left and a 'General' properties panel on the right. The 'Remodeling' button in the 'Fields' tree is highlighted with a red box. A 'Field Remodeling' dialog box is open, showing the 'Remodeling of [PRODUCTID]PRODUCTID' options. The 'Replace by InfoObject' option is selected and highlighted with a red box. The dialog also shows a list of available InfoObjects and fields for replacement.

# Data Integration with **SAP BW/4HANA 2.0**



# Openness: Data Integration SAP BW/4HANA 2.0

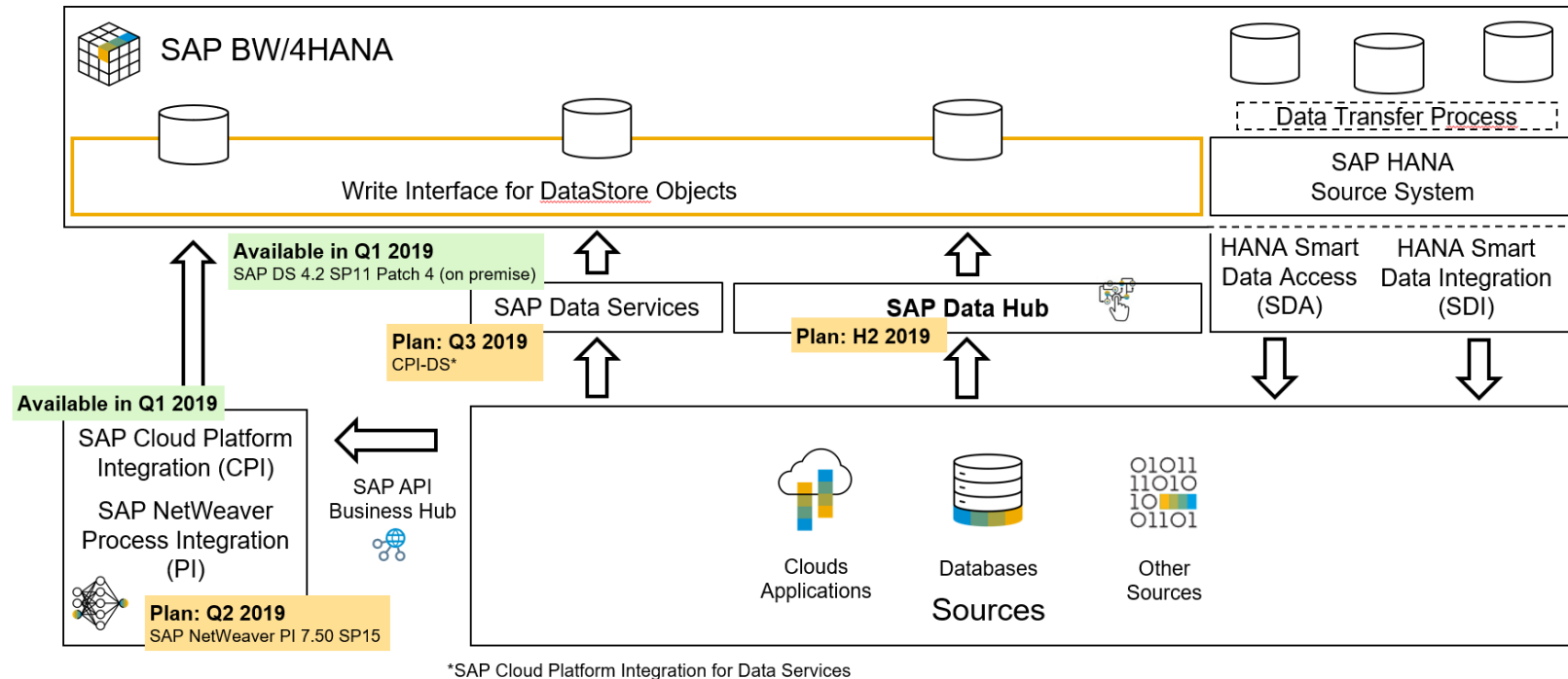
## Feature Description

- New DataStore Object setting “Write Interface Enabled” to write directly into Inbound Queue
- Support for Standard- and Staging DataStore Objects
- Integration for:
  - SAP Data Services
  - SAP Cloud Platform Integration (CPI)
  - SAP NetWeaver PI (planned for Q2/2019)
  - SAP Data Hub Integration (planned for H2/2019)
- Successor for SAP Web Service and SAP Data Services Source System (manual conversion)
- No open support for ETL partners

## Benefits

- Cost savings
- Simplification

## Data Integration Scenarios

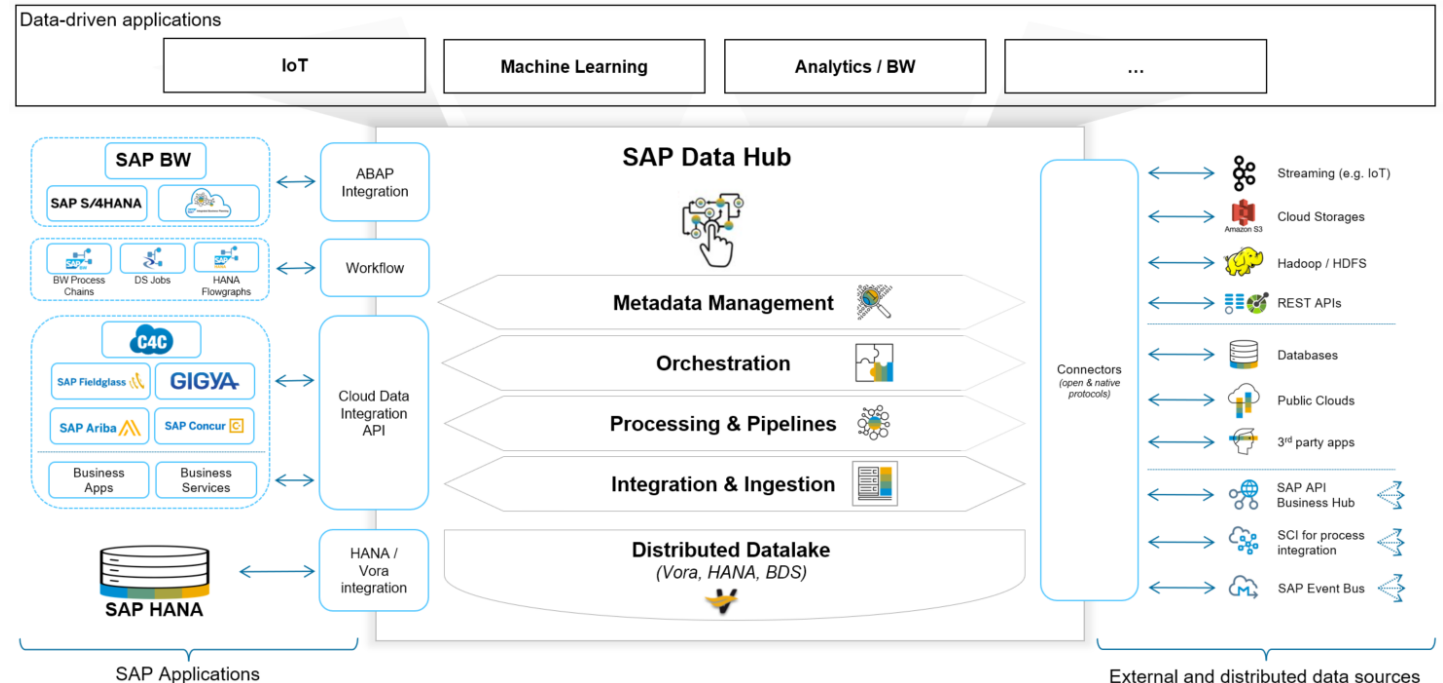




# Openness: Big Data Warehousing with SAP BW/4HANA and SAP Data Hub

- Close Integration with S/4HANA & SAP Cloud Applications (via common Cloud Data Integration API)
- Schema-less Data Warehousing with high automation and minimal Modeling
- Data Lake as primary high volume and computation persistency
- Scalable Storage and Data Processing capabilities
- Data Processing beyond OLAP with Machine Learning / Predictive Analytics ...

## Data Warehousing for the Intelligent Enterprise based on the SAP HANA Data Management Suite

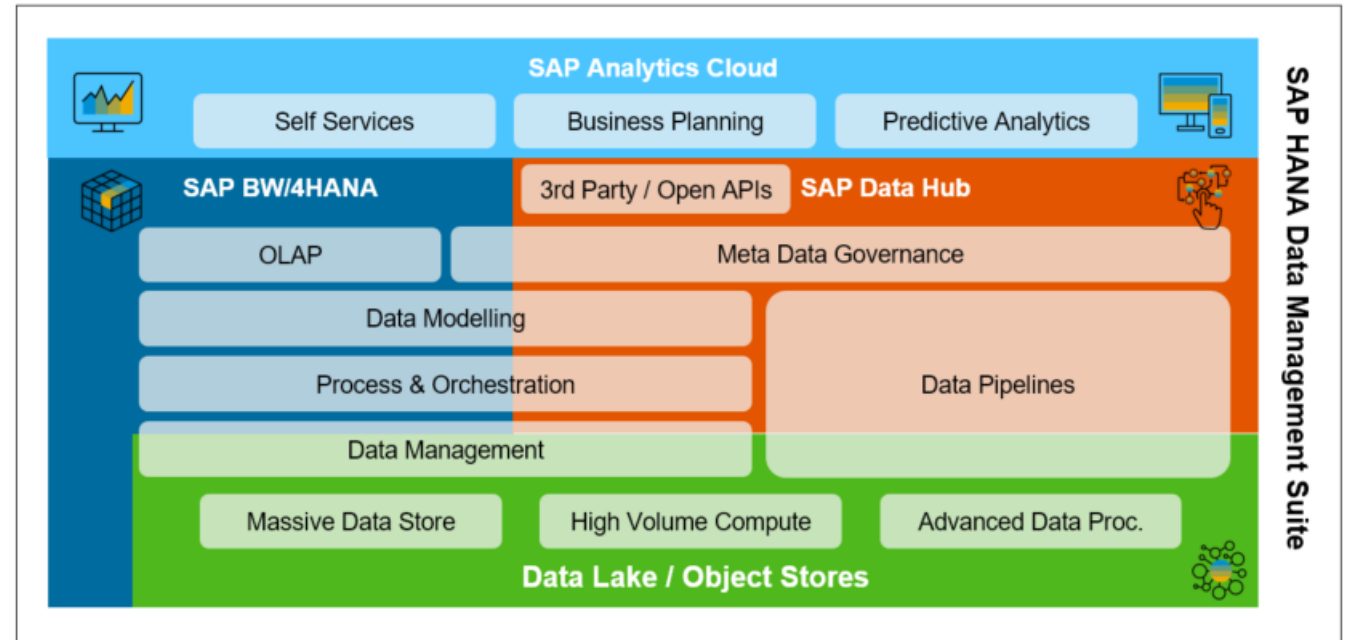


# Openness: Data Integration SAP BW/4HANA 2.0 and SAP Data Hub

## Feature Description

- Process Orchestration
  - **Execute new SAP Data Hub 2.x Pipelines and Workflows from SAP BW/4HANA\***
  - Execute SAP BW (>= 7.4) and SAP BW/4HANA Process Chains from SAP Data Hub Workflows
- Data Management
  - **Direct write to Data Store Objects from SAP Data Hub pipelines\***
  - Direct read from InfoProviders & Queries into SAP Data Hub Pipelines
  - BW Data Transfer Operator in SAP Data Hub
  - Big Data Source System in SAP BW/4HANA (SAP Vora and Spark)
  - Open Hub in SAP BW 7.50 and SAP BW/4HANA to Hadoop File System (HDFS)
- Meta Data Governance
  - Connect SAP BW and SAP BW/4HANA to the SAP Data Hub Meta Data Explorer

## SAP Data Hub Integration



\*New features in BW/4HANA 2.0 are **highlighted**

# Openness: Data Integration from SAP S/4HANA Cloud to SAP BW/4HANA 2.0

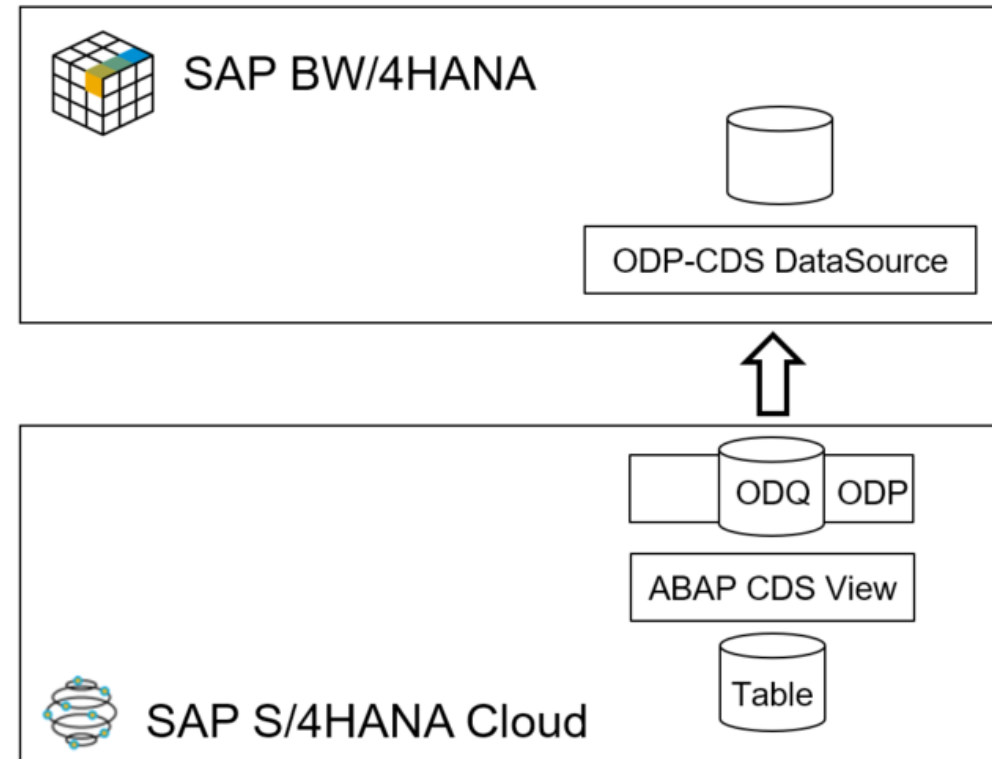
## Feature Description

- Technical framework and connectivity (HTTP / SOAP based) between SAP BW/4HANA and SAP S/4HANA Cloud (communication scenario)
- Application based ABAP CDS Content for extraction (e.g. financials, logistics, ...)
- Planned for SAP S/4HANA Cloud 1905
  - Status Quo: see [SAP Note 2674373](#)
  - [SAP Help Portal](#) for further information
- Easy to extend and support for custom ABAP CDS Views

## Benefits

- Cost savings
- Simplification

## SAP S/4HANA Cloud Integration



**Customer availability planned for  
S/4HANA Cloud in 2019**

# Openness: SQL View for Look-ups on DataStore Objects

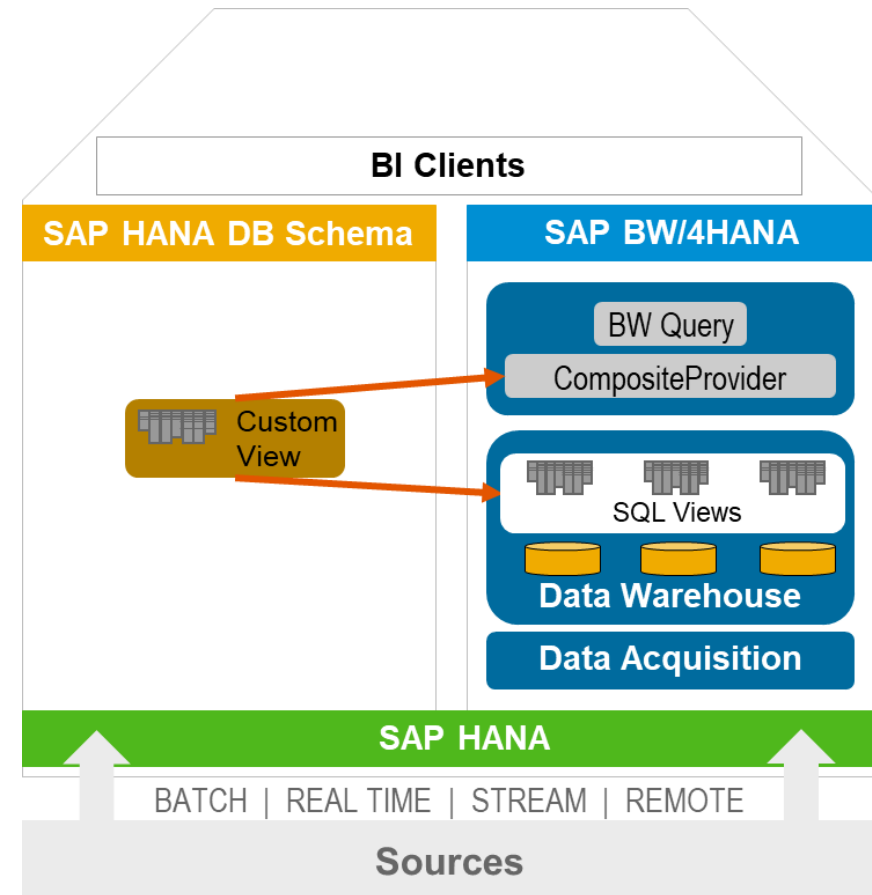
## Feature Description

- SAP BW/4HANA 2.0 creates an External SAP HANA SQL View on ADSOs
  - Exposes only fields/InfoObjects of the ADSO, no join with text, master data
  - Also includes fields considered not reporting-relevant
  - AMOUNT fields included in internal and external format (i.e. with and without decimal shift)
  - Covers all ADSO partitions – hot, warm and cold
  - Automatically created for all ADSOs, no user maintenance required (/<Namespace>/A<adsonm>8)
  - More information available in [SAP Note 2723506](#)

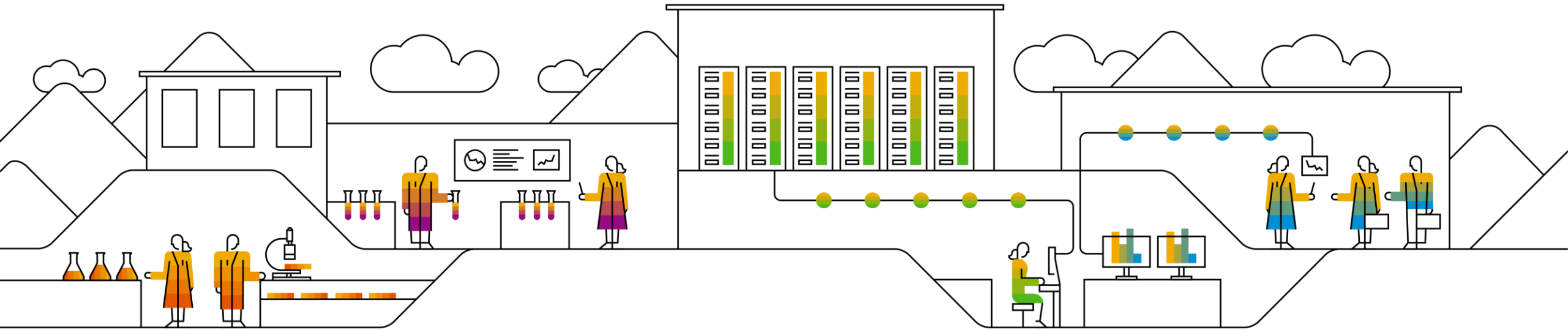
## Benefits

- Provides Access for Lookups, JOINS, etc. in SQL Transformations or for SAP HANA native access
- Enhanced support for mixed scenarios

## DataStore Object Look-up SQL View



# Data Protection Management in SAP BW/4HANA 2.0



# Data Protection & Privacy: Data Protection Workbench - Motivation

## Situation today

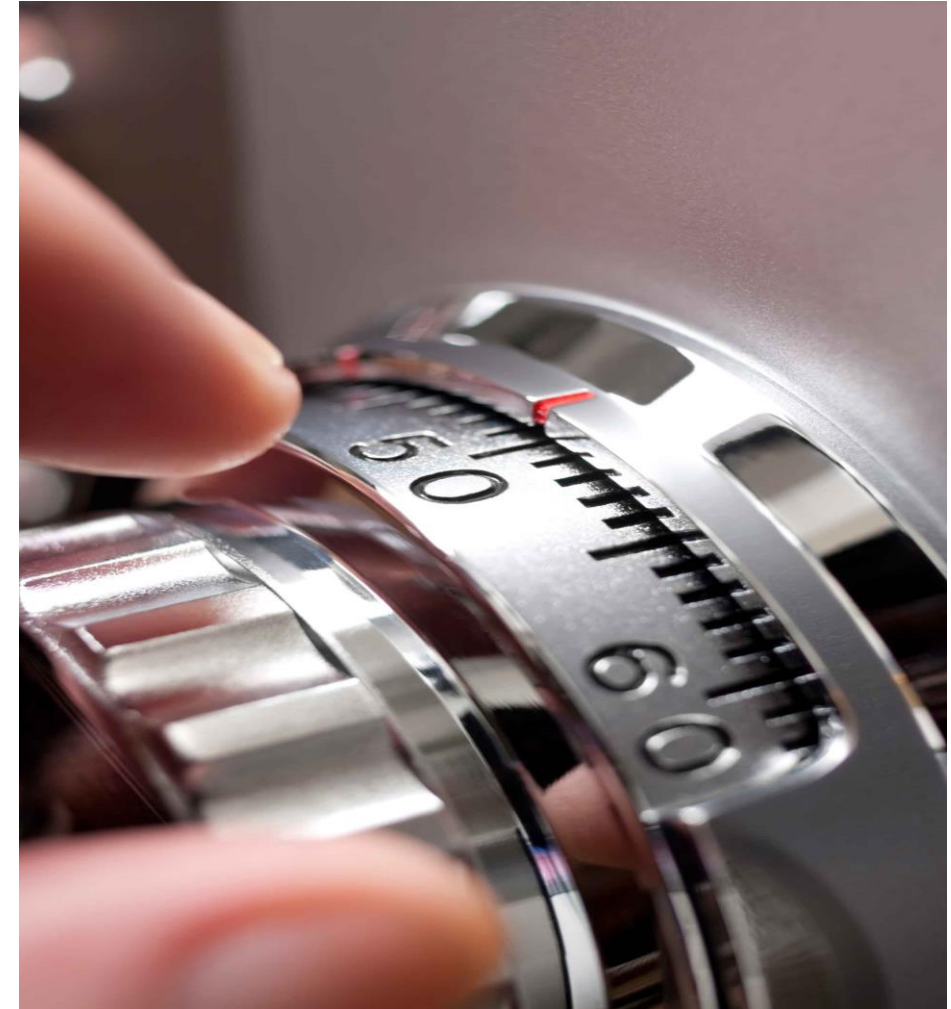
- Personal data is increasingly protected by laws (e.g. [EU GDPR](#))
- SAP BW/4HANA offers capabilities for Data Protection & Privacy support (see [security guide SAP BW/4HANA](#))
- Generic deletion capabilities in SAP BW/4HANA are independent of Business Suite handling
- SAP ILM ensures retention management in operational systems and is used to support data protection & privacy compliance

## Challenge

- Improved support and tight integration of SAP BW/4HANA with SAP ILM to delete replicated personal data in SAP BW/HANA after the end of purpose of the data.

## Approach

- SAP ILM notification framework allows to persist notifications of deleted (personal) data during ILM processes
- Replicate notifications from SAP ILM to SAP BW/4HANA
- Data Protection Workbench supports:
  - Identify InfoProviders containing sensible data
  - Selective deletion of corresponding transactional- and master data records



# Data Protection & Privacy: Data Protection Workbench - Process

## Feature Description

### SAP ILM

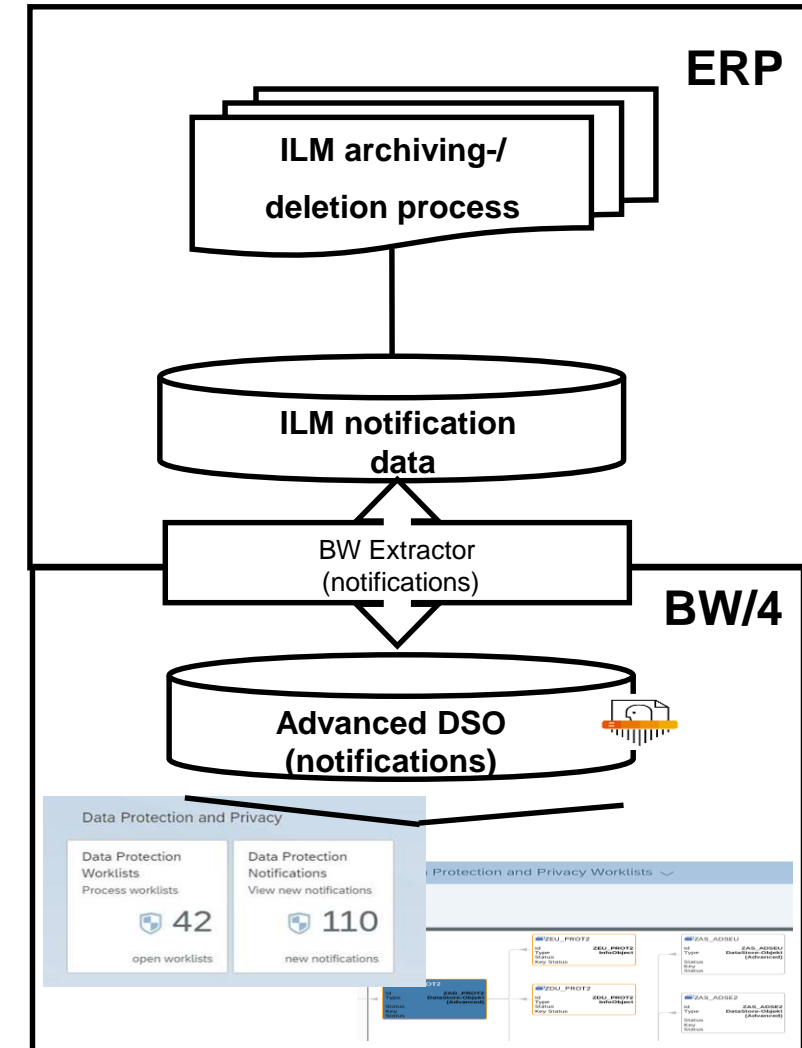
- SAP ILM persists events during SAP ILM processes (e.g. deletion of personal data)
- Mapping of SAP ILM object (e.g. ‚Sales Order‘) to SAP BW/4HANA DataSource allows identification of relevant data targets in SAP BW/4HANA

### Data Protection Workbench

- Persist notifications from SAP ILM into a SAP BW/4HANA Data Store Object
- Seamless integration into Fiori-based SAP BW/4HANA Web Cockpit
- Grouping of notifications into worklists according to subject matters to orchestrate the deletion process
- Identification of InfoProviders along a data flow containing the data to be deleted
- Documentation of worklist processing status (for legal auditing)

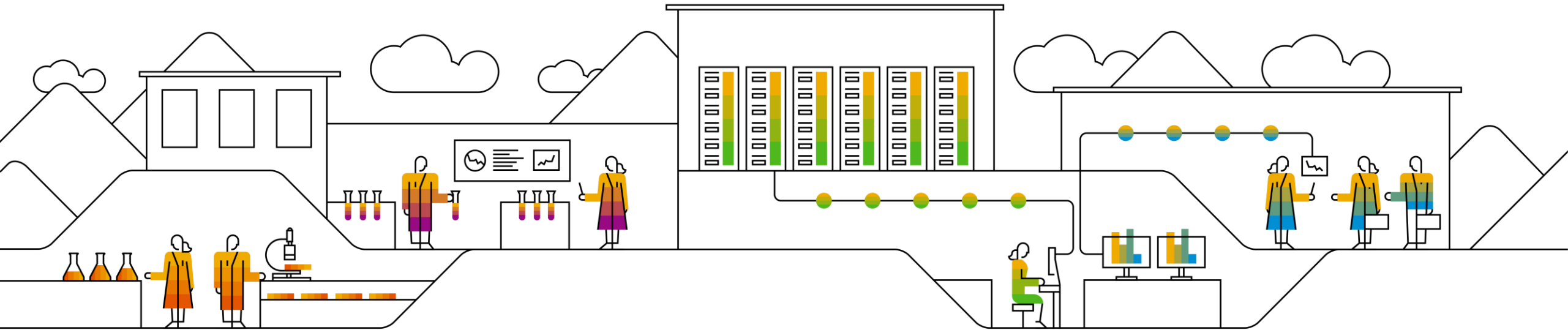
### Benefits

- Integrated solution to consistently delete replicated data from supported operational SAP source systems to reduce administration effort
- Modern UI seamlessly integrated in SAP BW/4HANA Web Cockpit





# Analytic Engine and SAP Analytics Cloud Integration in **SAP BW/4HANA 2.0**





# High Performance: Analytic Engine\*

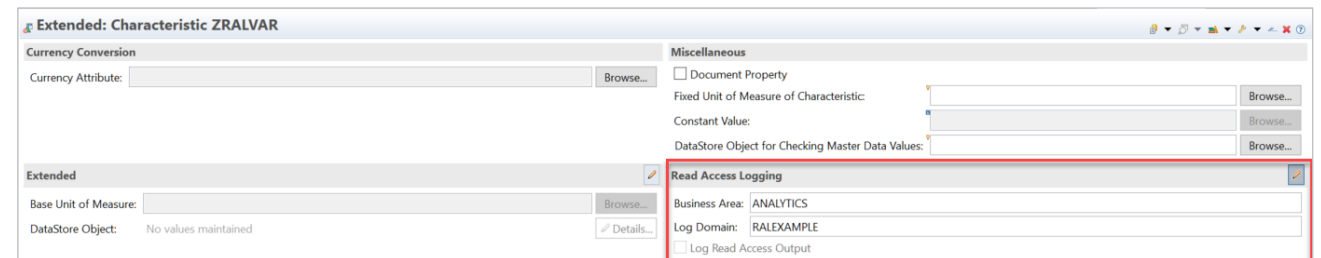
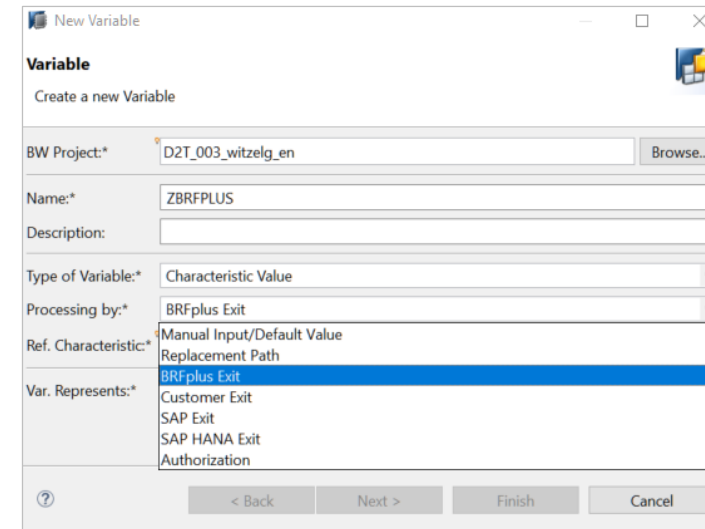
## New Features

- Conditions calculated in SAP HANA (push-down)
  - TopN, BottomN, LessThan, GreaterThan, NotBetween, ...
- RSEADMIN (maintain analytic authorization) in SAP BW/HANA Web Cockpit
- Variable Type BRF+ (used for customer defined validations, derivations and calculations)
- Read Access Logging (RAL) integration for advanced auditing
- Custom Exception Aggregation and IF Operator for Analysis Office and SAC
- SAP Analytics Cloud Adoption through SAP BW Live Connection including new Chart Support

## Benefits

- Higher Performance due to push-down to the SAP HANA database
- More flexibility in variable definition

## Analytic Engine



\* [A blog for detailed information is available](#)

# Simplicity: New Chart Types for SAP Analytics Cloud on SAP BW/4HANA

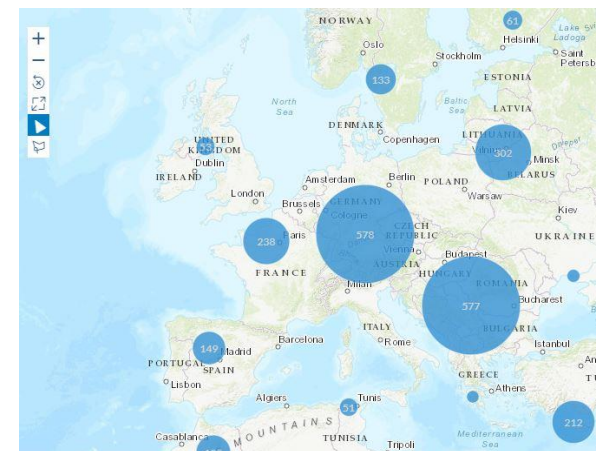
## Feature Description

- Support for additional chart types with SAC Live connection
  - Waterfall Chart
  - Geospatial
  - Time Series
  - Variance Chart
  - Linked Analysis with more than one dimension
  - Conditions
  - Tuple Filter

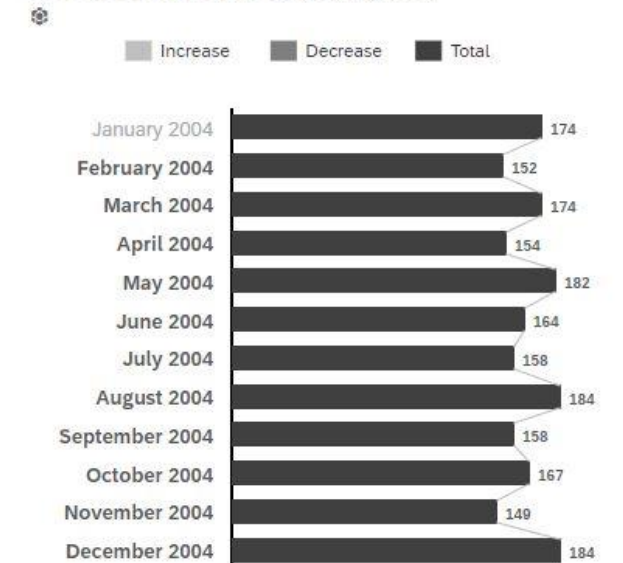
## Benefits

- New visualization capabilities

## New SAP Analytics Cloud Chart Types



OBC\_COUNT per Fiscal year / period



# Thank you.

Contact information:

**Product Management SAP BW/4HANA**

# Abbreviations

ABAP	Advanced Business Application Programming	DWaaS	Data Warehouse as a Service	ODQ	Operational Delta Queue
ADSO	Advanced DataStore Object	ECC	Enterprise Core Component	ODS	Operational DataStore
AFL	Application Function Library	EDW	Enterprise Data Warehouse	OLAP	Online Analytic Processing
AGS	SAP Active Global Support	EIM	Enterprise Information Management	PSA	Persistent Staging Area
ASE	SAP Adaptive Server Enterprise Database	ELT	Extract, Load, Transform	RDBMS	Relational Database Management System
AWS	Amazon Web Services	ERP	Enterprise Resource Planning	SDI	SAP HANA smart data integration
BAPI	Business Application Programming Interface	ETL	Extract, Load, Transform	SLO	System Landscape Optimization
BEx	Business Explorer	FI,CO,SD,MM,HR	Financials, Controlling, Sales & Distribution, Material Management,, Human Resources	SLT	SAP Landscape Transformation
BI	Business Intelligence	HAP	SAP HANA Analytic Process	SOAP	Simple Object Access Protocol
BW	Business Warehouse	HEC	SAP HANA Enterprise Cloud	SP	Support Package
C4C	Cloud for Customers	HTML	Hypertext Markup Language	SPS	Support Package Stack
CRM	Customer Relationship Management	IQ	SAP IQ Database	SQL	Structured Query Language
DB	Database (Connect)	IoT	Internet of Things	SUM	Software Update Manager
DLM	Data Lifecycle Management	LSA	Layered Scalable Architecture	SWPM	Software Provisioning Manager
DMO	Database Migration Option	LSA++	Layered Scalable Architecture for SAP HANA	UD	Universal Data (Connect)
DSO	DataStore Object	ML	Machine Learning	UI	User Interface
DW	Data Warehouse	NLS	Near-line Storage	UI5	SAP UI Development Toolkit for HTML5
DWH	Data Warehouse	ODP	Operational Data Provisioning	UX	User Experience